

CLAIMS

What is claimed is:

Sub 91

1. In a client processing system communicating with a modem over a communication link, the communication link including a telephone line connected to the client system, a method of responding to a disruption detected by the client processing system during communication with the modem, the method comprising:

terminating communication with the server in response to a disruption on the telephone line;

establishing an on-hook condition on the telephone line; and

waiting for a ring signal.

Sub 2

2. A method according to claim 1, wherein the disruption is caused by a Call Waiting signal.

3. A method according to claim 1, further comprising the steps of:

if the ring signal is received within a first predetermined period of time, then:

waiting for an off-hook condition to occur on the telephone line within a second predetermined period of time following the ring signal; and

if the off-hook condition is not detected on the telephone line within the second predetermined period of time, then:

establishing the off-hook condition on the telephone line;

and

outputting an outgoing message onto the telephone line.

24

1 4. A method according to claim 3, further comprising the steps of:
2 recording an incoming message after outputting the outgoing message;
3 re-establishing the on-hook condition after recording the incoming
4 message; and
a 5 re-establishing communication with the ~~server~~ ^{second processing system}

1 5. A method according to claim 1, further comprising the steps of:
2 if a ring signal is received within a first predetermined period of time,
3 then:
4 waiting for an off-hook condition to occur on the telephone line
5 within a second predetermined period of time following the ring signal;
6 if the off-hook condition is detected within the second predetermined
7 period of time, waiting for an on-hook condition to occur on the telephone
8 line; and
9 upon detecting the on-hook condition, re-establishing communication
a 10 ~~with the server.~~ ^{second Processing System}

11 6. A method according to claim 1, further comprising the ~~step~~ ^{Steps} of, if a ring
12 signal has not been received after a first predetermined period of time,
13 waiting for an on-hook condition to occur on the telephone line; and
14 upon detection of the on-hook condition, re-establishing
a 15 communication with the ~~server.~~ ^{second Processing system}

1 7. In a client processing system communicating with a server over a
2 communication link, the communication link including a telephone line, a
3 method of managing a communications disruption during communication
4 with the server, the method comprising:
5 terminating communication with the server in response to the
6 disruption;
7 detecting an off-hook condition following the disruption;
8 if the off-hook condition is detected following the disruption, waiting
9 for an on-hook condition; and
10 upon detecting the on-hook condition, re-establishing communication
11 with the server.

1 8. In a client system coupled to a server system by a communication link, a
2 method of establishing communication with the server, the client system
3 including first transceiver means for communicating with the server and
4 second transceiver means for communicating with the server, the method
5 comprising the steps of:
6 receiving a user input requesting initiation of communication between
7 the client and the server; and
8 in response to the user input, selecting either the first transceiver
9 means or the second transceiver means for communicating with the server
10 based on a cost criterion.

1 9. A method according to claim 8, wherein the cost criterion corresponds to a
2 monetary rate associated with use of the first transceiver means to

3 communicate with the server relative to a monetary rate associated with use
4 of the second transceiver means to communicate with the server.

1 10. A method according to claim 9, wherein the cost criterion is time-of-day.

1 11. A method according to claim 8, wherein the first transceiver means
2 comprises a telephone modem and the second transceiver means comprises
3 an Integrated Services Digital Network (ISDN) transceiver.

1 12. A method according to claim 8, wherein the first transceiver means
2 comprises a telephone modem and the second transceiver means comprises a
3 cable television modem.

1 13. A method according to claim 8, wherein the first transceiver means
2 comprises a cable television modem and the second transceiver means
3 comprises an Integrated Services Digital Network (ISDN) transceiver.

a 14. In a client processing system coupled to a ^{Communication device} modem by a communication
a 2 link, a method of managing a disruption in communication with the ^{Communication device} modem,
3 the method comprising:
a 4 terminating the communication with the ^{Communication device} modem in response to the
5 disruption;
6 pausing for a predetermined period of time;
7 after expiration of the predetermined period of time, determining
8 whether the disruption is still present; and

a

9 automatically re-establishing communication with the ^{communication device} ~~modem~~ if the
10 disruption is no longer present.

1 15. A method according to claim 14, wherein the disruption is caused by a Call
2 Waiting signal.

1 16. A method according to claim 14, wherein the communication link
2 comprises a segment used by both the client processing system and a telephone
3 system, the telephone system having an extension telephone coupled to the
4 segment, wherein the disruption is caused by the extension being operated.

1 17. In a client-server processing system including a client processing system
2 coupled to a first server processing system by a communication link, wherein
3 a segment of the communication link is shared by the client processing system
4 with a telephone system, such that an incoming telephone call by a calling
5 party including Caller ID information is receivable by the client processing
6 system, a method of providing an identity of the calling party to the user of the
7 client processing system, the method comprising the steps of:

8 inputting the Caller ID information to the client processing system;
9 accessing telephone directory information stored on a remote server
10 processing system;

11 locating a telephone number in the telephone directory information
12 corresponding to the Caller ID information;

13 locating a name in the telephone directory information corresponding
14 to the telephone number; and

15 providing the name corresponding to the Caller ID information to the
16 client processing system.

1 18. A method according to claim 17, wherein the telephone system has an
2 extension telephone coupled to the segment, such that an incoming telephone
3 call by a calling party including Caller ID information is receivable at the
4 extension by a user of the client processing system,

1 19. In a client processing system coupled to a first server processing system by
2 a communication link, wherein a segment of the communication link is
3 shared by the client processing system and a telephone system, such that a
4 telephone call including Caller ID information is receivable by the client
5 processing system, the Caller ID information including a telephone number,
6 the client processing system including a processor, a memory coupled to the
7 processor, and a display device coupled to the processor, a method of
8 responding to the incoming call, the method comprising the steps of:
9 inputting the Caller ID information;
10 determining whether the Caller ID information is stored in the
11 memory;
12 if the Caller ID information is stored in the memory, determining
13 whether a name corresponding to the Caller ID information is stored in the
14 memory; and
15 if a name corresponding to the Caller ID information is stored in the
16 memory, causing a message including the name to be displayed on the display
17 device.

1 20. A method according to claim 19, further comprising the step of, if a name
2 corresponding to the Caller ID information is not stored in the memory,
3 transmitting a request to a second server processing system to provide the
4 name corresponding to the Caller ID information, the request including the
5 telephone number.

1 21. A method according to claim 20, further comprising the step of receiving
2 the name corresponding to the Caller ID information from the second server
3 processing system in response to the request.

1 22. A method according to claim 19, wherein the telephone call including
2 Caller ID information is receivable by a user of the client processing system at
3 an extension telephone.

1 23. A method according to claim 19, wherein the message includes an
2 indication that an incoming telephone call is being received.

1 24. A method according to claim 19, wherein the client processing system is
2 configured to allow the user to browse the World Wide Web.

1 25. A client system for communicating with a remote server system over a
2 communication link, wherein a segment of the communication link is shared
3 by the client system and a telephone system, the client system capable of

4 responding to user inputs received from a remote control device, the client
5 system comprising:

6 a television set coupled to receive visual display information from the
7 processor, the television set for displaying the visual display information to a
8 user of the client system; and

9 a processor configured to cause the client system to allow the
10 user to navigate through ^{a graphical} ~~an interactive~~ display environment displayed
11 on the television set based on the user inputs received from the
12 remote control device and information retrieved from the remote
13 server system;

14 means for receiving the incoming telephone call;

15 means for recording the incoming telephone call; and

16 means for outputting a recording of the incoming telephone call
17 to the user.

1 26. A client system according to claim 25, wherein the incoming call includes
2 Caller ID information including a telephone number.

1 27. A client system according to claim 26, further comprising means for
2 displaying a message on the television set indicating the presence of the
3 incoming telephone call, the message including a name corresponding to the
4 telephone number.

1 28. A client system according to claim 27, wherein the processor is further
2 configured to cause the client system to:

3 input a caller identity specified by the user;
4 compare the Caller ID information in the incoming telephone call to
5 the caller identity specified by the user;
6 if the Caller ID information in the incoming telephone call corresponds
7 to the caller identity specified by the user, automatically transmit a
8 predetermined electronic mail message to a predetermined logical address.

1 29. A client system according to claim 27, wherein the processor is further
2 configured to cause the client system to:
3 input a caller identity specified by the user;
4 compare the Caller ID information in the incoming telephone call to
5 the caller identity specified by the user;
6 if the Caller ID information in the incoming telephone call corresponds
7 to the caller identity specified by the user, automatically initiate an outgoing
8 telephone call to a predetermined telephone number.

1 30. A client system according to claim 29, further comprising means for
2 playing a recorded audio message to a receiving party in response to the
3 outgoing telephone call being connected to the receiving party at the
4 predetermined telephone number.

1 31. A client system according to claim 25, wherein an incoming telephone call
2 is receivable at an extension telephone by a user of the client processing
3 system.

1 32. A client system for communicating with a server system over a
2 communication link, the client system comprising:

3 a processor;

4 a memory;

5 a housing containing the processor and the memory, the housing
6 including an indicator for providing a visible indication to a user of the client
7 system;

8 a display device separate from the housing, the display device providing
9 a display to the user based on display information received from the processor;

10 means for determining when the user has unread electronic mail; and

11 means for activating the indicator when the user has unread electronic
12 mail.

1 33. A client system according to claim 32, wherein electronic mail addressed to
2 the user is received by the server, the client system further comprising means
3 for contacting the server to determine whether the user has unread electronic
4 mail stored in the server.

1 34. A client system according to claim 32, wherein the indicator is a light-
2 emitting diode.

add 91